



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/657,194

09/09/2003

Masatoshi Kimura

021669

1624

38834

7590

08/19/2008

WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP
1250 CONNECTICUT AVENUE, NW
SUITE 700
WASHINGTON, DC 20036

EXAMINER

TRAN, VINCENT HUY

ART UNIT

PAPER NUMBER

2115

MAIL DATE

DELIVERY MODE

08/19/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/657,194	Applicant(s) KIMURA, MASATOSHI	
	Examiner VINCENT T. TRAN	Art Unit 2115	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 June 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is responsive to the communication filed on 6/13/2008
2. Claims 1-20 are pending for examination.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
3. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art ("AP") in view of Gibson et al. U.S. Patent No. 5,835,719 ("Gibson") or Lee.
4. As per claim 1, AP teaches a gateway card that is connected to an information processor and that receives and transmits data between different networks [0006, 0007], the gateway card comprising:

an access accepting unit that accept an access request from an apparatus connected to one of the network; and

an access control unit that leads the apparatus to make access to an external apparatus connected to another one of the networks [*inherent for a gateway device – all the devices in home that have Internet connection function are connected to the gateway device (0007)*],

wherein the access control unit carries out a control to adjust a difference between communication protocols of the one of the networks and the another one of the networks [0006 – *What the gateway device does is that it adjusts differences in communication protocols between the network at home and external networks including the Internet*],

wherein the access request is an access request not to be intended for waking up or sleeping the information processor by the external apparatus [*inherent to the home gateway device - for example, accessing internet*].

AP does not teach an access control unit that leads the apparatus to make access to an external apparatus in a state that the operation of the information processor is maintained in a power saving operation mode, when the access request is accepted in a state that the operation of the information processor is in a power saving operation mode and also when the access request corresponds to the access to the external apparatus.

The disadvantage of the AP gateway device is that the gateway device has to continuously connect to the Internet, the device needs to be turned on all the time to handle accesses from infrastructures outside of home, so that the apparatus is always on, therefore increase power consumption.

Gibson teaches another system comprises a personal computer forming part of a node [router see abs] of a network and further transmitting information sent via a LAN to the correct node or device. Here, the personal computer is use to listen for a special information packet; and if the special information packet receive by the personal computer is not intended to be sent to the particular computer that is listening for the information, the particular computer will not be activated. The special information packet [50], although containing the remote wake-up information, it's main purpose is not to waking up or sleeping the information but rather containing data to be process by the information processor.

The information packet 50 is partitioned into 6 different fields. The first field contains the 6-byte Destination Address 52 indicating where the information packet 50 is to be sent. The second field contains a 6-byte Source Address 54 indicating where the information packet 50 originated from. The third field is a 2-byte length field 56 which contains the length of the frame data within the information packet 50. The fourth field is the Frame Data block 58 which may vary from 0 to 1404 bytes in length containing the data to be processed. In the preferred embodiment of the present invention a 96 byte wake-up data sequence 60, comprising 16 consecutive repetitions of the Destination Address 52 is embedded within the Frame Data block 58. The wake-up data sequence can be located anywhere within the Frame Data block 58. Finally, the sixth field contains a 4-byte Cyclic Redundancy Check (CRC) error control code 62 for checking the accuracy and reliability of the data 58 that was transferred by the information block 50. The total length of the information packet 50 of the present invention may vary from 114 to 1518 bytes. The functions of the particular information packet 50 discussed above will be described in greater detail below. [col. 3 lines 32-53]

The advantage of Gibson invention is the ability to only wake-up the computer coupled to a network when there is information to be processed by that particular computer in the low power mode which save power.

Another advantage of Gibson invention is the ability to transmit information to various users along the network without the use of the central processing unit [col. 2 lines 1-22].

Specifically, Gibson teaches a network card located within the subsystem of the personal computer system [12 – col. 3 lines 5-12], the network card comprising:

an access accepting unit [104] that accepts an access request from an apparatus connected to the networks [computer network 11] ; and

an access control unit [12] that leads the apparatus to make access [information packet 50] to an external apparatus in a state that the operation of the information processor is maintained in a power saving operation mode, when the access request is accepted in a state that the operation of the information processor is in a power saving operation mode and also when the access request corresponds to the access to the external apparatus [*The information packet contains the 6-byte destination address indicating where the information packet 50 is to be sent (col. 3 lines 32-34). If the destination address does not match with address of the intended personal computer, the personal computer will not wake-up (claim 1). The information packet is then inherently routed to the correct node*].

Lee teaches another invention relates generally to the field of information communications and more particularly to energy conserving information communication apparatuses kept alive through the least amount of energy technologically possible for establishing instant operable between an energy conserving operating system operable between an energy conserving and a main operating state, to in Internet service provider or Internet communication system for providing requested communication, and to the method therefore, so as to allow the energy conserving information communication apparatuses to stay connected via the Internet, yet without requiring to stay online.

Specifically, Lee teaches a energy conserving communication apparatus [400 – an expansion card to be plugged into a mother board (col. 13 lines 20-23)] comprising:

an access accepting unit [420] that accepts an access request from an apparatus connected to the networks [401]; and

an access control unit [450] that leads the apparatus to make access to an external apparatus in a state that the operation of the information processor is maintained in a power saving operation mode, when the access request is accepted in a state that the operation of the information processor is in a power saving operation mode and also when the access request corresponds to the access to the external apparatus [*The communication circuit 450 (i) determining if incoming information received from a remote communication system (such as a computer or phone) requests any data forwarding or routing service, (ii) if yes, the communication circuit 450 initiate another communication link to another remote communication system in accordance with a forwarding or routing instruction stored in the Memory, and (iii) transmitting requested information or at least a message to another remote communication system (col. 13 line 64 to col. 14 line 9) without activating the main system*].

wherein the access request is an access request not be intended for waking up or sleeping the information processor by the external apparatus [*here, the incoming information is not intended for waking up or sleeping the information*].

The operating instructions comprise the steps of (i) determining if incoming information received from a remote communication system (such as a computer or phone) requests any data-forwarding or routing service, (ii) if yes, selectively instructing communication circuit 450 or requesting the remote communication system to further initiate another communication link to another remote communication system in accordance with a forwarding or routing instruction stored in SRAM 440, and (iii) transmitting requested information or at least a message to the another remote communication system (such as another computer, pager, portable or mobile communication device). When carrying the another remote communication system, a person becomes instantly reachable for receiving any urgent **electronic mails**. [col. 13 line 64 to col. 14 line 11]

At the time of the invention was made, it would have been obvious to one of ordinary skill in the art to have modified the system of AP with the access control unit that leads the apparatus to make access to an external apparatus in the state that the operation of information processor is maintained in a power saving operation mode as taught by Gibson or Lee.

The motivation for doing so would have been to save power.

5. As per claim 2, Gibson teaches, when the access request is accepted in a state that the operation of the information processor is in a power saving operation mode and also when the access request corresponds to the access to the information processor, the access control unit leads the apparatus to make access to the information processor in a state that the operation mode is returned from the power saving operation mode to the normal operation mode [col. 4 lines 41-59], and shifts the operation mode from the normal operation mode to the power saving operation mode after the access ends [col. 5 lines 22-34].

Lee also teaches, when the access request is accepted in a state that the operation of the information processor is in a power saving operation mode and also when the access request corresponds to the access to the information processor, the access control unit leads the apparatus to make access to the information processor in a state that the operation mode is returned from the power saving operation mode to the normal operation mode [Fig. 5 step S502 – S514], and shifts the operation mode from the normal operation mode to the power saving operation mode after the access ends [Fig. 5 step S519-S522].

6. As per claim 3, see discussion in claim 2.

7. As per claim 4, 5 and 6, Lee teaches an apparatus that is connected to an information processor and that receives and transmits data between different networks. Therefore, Lee teaches the method to operate the apparatus.

8. As per claim 7, 8 and 9, Lee teaches the method applied to the apparatus connected to an information processor and that receives and transmits data between different networks. Therefore, Lee teaches the steps to perform the method.

9. As per claim 10, it is noted that the limitation do not substantially differ from claim 1, with the exception of the limitation reciting “the information processor further includes a power control unit...” As demonstrated previously, Lee anticipated the limitation in claim 1. The limitation regarding the information processor further includes a power control unit that shifts the operation mode from a normal operation mode to power saving operation mode, when a predetermined shift factor occurred is also anticipated by Lee as show in module 214 of Fig. 3 (Switchable power-supply circuit) and from col. 5 line 66 to col. 6 line 5.

10. As per claim 11, Lee teaches, when the access request is accepted in a state that the operation of the information processor is in a power saving operation mode and also when the access request corresponds to the access to the information processor, the access control unit issues a return notice to return the operation of the information processor from the power saving operation mode to the normal operation mode [S414 fig. 5; col. 3 line to col. 4 line 14], then leads the apparatus to make access to the information processor [S516 fig. 5], and issues a shift notice to shift the operation mode from the normal operation mode to the power saving operation mode after the access ends [S522 fig. 5], and the power control unit returns the operation mode from the power saving operation mode to the normal operation mode based on the return notice,

and shifts the operation mode from the normal operation mode to the power saving operation mode based on the shift notice [Fig. 5].

11. As per claim 12, see discussion in claim 11.

12. As per claim 13, see discussion in claim 10.

13. As per claim 14, see discussion in claim 11.

14. As per claim 15, see discussion in claim 12.

15. As per claim 16, see discussion in claim 10.

16. As per claim 17, see discussion in claim 11.

17. As per claim 18, see discussion in claim 12.

18. Claims 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over AP in view of Dea.

19. As per claim 19, AP teaches a gateway card that interconnects an information processor, and at least one server via a first network, and at least one client via a second network, the first network and the second network having different communication protocols [0006-0007], the gateway card comprising:

an access accepting unit that accepts a request from the client to access the server or the information processor [inherent]; and

carrying out a control to adjust a difference between communication protocols of the different networks [0006].

AP does not teach the gateway card having a normal power mode and power saving mode.

The disadvantage of the AP gateway device is that the gateway device has to continuously connect to the Internet, the device needs to be turned on all the time to handle accesses from infrastructures outside of home, so that the apparatus is always on, therefore increase power consumption.

Dea teaches another invention relates to efficient power management of computer and, more particularly, relates to systems and methods fore reducing power consumption of computers in computer networks. Specifically, Dea teaches a NIC card that interconnects an information processor [12 or 28 fig. 1; col. 5 lines 63-65], and at least one server via a first network [26 or 18 fig. 1], and at least one client via a second network [31 fig. 1], the information processor having a normal power mode and a power save mode [110 fig. 2, col. 6 line 1-7], the NIC card comprising:

an access accepting unit that accepts a request from the client to access the server or the information processor [col. 6 lines 7-9¹];

a power mode checking unit that determines whether the information processor is in the normal power mode or in the power save mode [col. 8 lines 17-19]; and

an access control unit that executes the request form the client wherein if the request from the client is a request to access the server, the access control unit executes the request even if the power mode checking unit determines that the information processor is in the power save mode

¹ Since Gateway 28 is preferably an individual computer serves to link Lan 32 to Lan 10 where Lan 10 may be coupled via communication link 24 through a subsystem control unit/communication controller 26 and communications link 34 to gateway server 28 OR computer system 12 serves to link server 18 [Mainframe computer col. 5 line 45] to client computer 31 through communication link 22. Therefore, the access accepting unit in the

[The NIC card of system 12 or 28 would exam the request to determine whether the request is intended to interact with this particular station (col. 8 lines 8-16); and, if not, the information processor remains in the sleep or power-down state while inherently the access control unit executes to rout the request to it's intended target²],

wherein the access request is an access request not to be intended for waking up or sleeping the information processor *[the data packet contains information relevant to the particular station such as mail etc.]*.

the data frame portion of a frame is the portion which provides information as to whether a particular station should accept or reject a particular broadcast packet, e.g., whether in response to a given broadcast packet, a system board and associated CPU should be activated or, on the contrary, should remain in a low-power state because the data associated with the broadcast packet is not relevant to the particular station. [col. 2 lines 40-45]

For example, if, in doing the frame data matching and predetermined response functions 182, 188, it is determined that the data in the incoming packet in the frame data of FIG. 5 is a Netware IPX message for which a predetermined response is required, block 194 will (after determining this by utilizing the lookup table of FIG. 6), obtain the pointer to the appropriate response in the response buffer 208 and the length of such response, and then create a packet transmitting this appropriate response message as shown by block 196 onto the network [col. 10 lines 34-36].

At the time of the invention was made, it would have been obvious to one of ordinary skill in the art to have modified the system of AP with the access control unit that leads the apparatus to make access to an external apparatus in the state that the operation of information processor is maintained in a power saving operation mode as taught by Dea.

The motivation for doing so would have been to save power.

gateway card that interconnects an information processor [28 or 12 fig. 1] servers to accepts a request from the client [31 fig. 1] to access server [26, 18 fig. 1] or the information processor [28 or 12 of fig. 1].

² The Server 26, 18 would not able to receive the request if the gateway card of system 28 or 12 was not able to rout the request signal.

20. As per claim 20, it is noted that the limitation do not substantially differ from claim 19, with the exception of the access control unit now reciting “wherein if the request from the client is a request to access the information processor...” As demonstrated previously, AP modified by Dea anticipated the limitation in claim 19. The limitation regarding the access control unit, Dea teaches

a power mode checking unit that determines whether the information processor is in the normal power mode or in the power save mode [col. 8 lines 17-19]; and

an access control unit that executes the request form the client wherein if the request from the client is a request to access the information processor [162 fig. 4] and, if the power mode checking unit determined that the information processor is in the power save mode, the access control unit instructs the information processor to change the power mode to the normal power mode[170 fig. 4], executes the request, and instructs the information processor to change the power mode to the power save mode [inherent].

At the time of the invention was made, it would have been obvious to one of ordinary skill in the art to have modified the system of AP with the access control unit that instructs the information processor to change the power mode to the normal power mode when the control unit receive a request to access the information processor of Dea.

The motivation for doing so would have been to save power.

21. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Funk et al. US 20040019489 (“Funk”) in view of Khouli et al. U.S. Patent No. 6,308,278 (“Khouli”).

22. As per claim 1-18, Funk teaches a gateway card that is connected to an information processor [50] and that receives and transmits data between different networks [0021-0022], the gateway card comprising:

an access accepting unit that accepts an access request from an apparatus connected to one of the network [0022 & 0026– each device 21, 23, 25, 27 are coupled to the home computer gateway 50 directly in order to receive command via the Internet or to a local telephone network interface],

where the access control unit carries out a control to adjust a difference between communication protocols of said one of the networks and another one of the networks [inherent for a gateway device];

wherein the access request is an access request not to be intended for waking up or sleeping the information processor by the external apparatus [*access request for controlling a home device - paragraph 0006-0009*].

Funk does not teach a access control unit that leads the apparatus to make access to an external apparatus in a state that the operation of the information processor is maintained in a power saving operation mode or leads the apparatus to make access to the information processor in a state that the operation mode is returned from the power saving operation mode to normal operation mode.

The disadvantage of Funk home computer gateway is that the gateway device has to continuously connect to the Internet, the device needs to be turned on all the time to handle

accesses from infrastructures outside of home, so that the apparatus is always on, therefore increase power consumption [0022 – remain connected to the Internet continuously].

Khouli teaches another invention relates to power conservation within a digital computer, and more particularly, to power management system for a desktop computer. Specifically, Khouli teaches the computer comprising a access accepting unit and an access control unit that

leads the apparatus to make access to an external apparatus in a state that the operation of the information processor is maintained in a power saving operation mode, when the access request is accepted in a state that the operation of the information processor is in a power saving operation mode and also when the access request corresponds to the access to the external apparatus;

leads the apparatus to make access to the information process in a state that the operation is returned form the power saving operation mode to the normal operation mode when the access request corresponds to the access to the information processor [col. 8 lines 1-28] and shifts the operation mode from the normal operation mode from the normal operation mode to the power saving operation mode after the access ends [inherent].

wherein the access request is an access request not to be intended for waking up or sleeping the information processor by the external apparatus [video signal for recording – col. 8 line 19]

At the time of the invention was made, it would have been obvious to one of ordinary skill in the art to have modified the system of Funk with an access control unit operable to shifts

the operation mode from the power saving operation mode normal operation only when the access request correspond to the access to the information processor of Khouli.

The motivation for doing so would have been to save power.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to VINCENT T. TRAN whose telephone number is (571)272-7210. The examiner can normally be reached on 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas c. Lee can be reached on (571)272-3667. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Vincent T Tran/
Examiner, Art Unit 2115

/Thomas Lee/
Supervisory Patent Examiner, Art Unit 2115

